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Charrette:project

# Move the Neighbourhood with Children: Learning by co-designing urban environments

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**ABSTRACT** What happens when children participate in the design, development and construction of public urban space? What are their dreams and visions for a common space when they are given the chance to imagine, build and express their ideas? What kind of pedagogical and collaborative settings emerge through the act of making? And further, what kind of impact can be gauged in relation to the local context and neighbourhood? This case study unfolds the context-based learning environment of a co-design process through developing a public space with two school classes and local stakeholders. The practice-based research project investigates participatory methods for the development of ‘playable’ and socially engaging urban spaces and seeks a greater understanding of co-design as an educational approach and design tool and of its relation to urban planning practice.

**KEYWORDS** co-design, public space, temporary interventions, learning environments, urban development

## The project setup

The research project *Move the Neighbourhood* explores children’s engagement with public space through a collaborative process of co-designing and building a series of public spaces in a local community in Copenhagen, Denmark. The project investigates whether and how co-design of urban spaces in collaboration with children can develop more locally integrated, interesting, and playful outdoor spaces that facilitate social interaction and physical activity as well as contemplation.

Within this framework the research explores which approaches and steps can be conceptualised in co-design activities to inform current planning and design practice and its relation to wider society. The practice-based<sup>1</sup> research project is themed around children’s use and understanding of public space and developed and constructed through a collaborative design setup.

The initiative is part of an interdisciplinary project with participants from three Danish research institutions: the University of

Copenhagen, The Royal Danish Academy of Fine Arts (Schools of Architecture, Design and Conservation), and the University of Southern Denmark. In the period from 2015 to 2020, the partners have been and will be working together to develop, construct and evaluate the physical spaces and the processes related to them. While this subproject works with children as collaborators and main target group, a second intervention in the research setup addresses spaces and participation aimed at elderly people in the same neighbourhood in Sydhavnen, Copenhagen. The project is situated within a municipal integrated urban renewal initiative in the district,<sup>2</sup> and is thereby part of a broader urban planning context and transformation.

The research aims are manifold as we investigate both the co-design methods and the impact of the spatial outcome. Thus we explore how co-design methods within architecture and landscape architecture can be useful pedagogical frameworks and tell us more about how children engage and learn in the process of designing and building. We seek to understand how children's contributions can foster innovation and promote even more interesting designs for public space. However, we also trace the project's impact on a broader scale within the local planning context. We follow and analyse how the process and the project result influence and shape the local planning agenda towards newly initiated public spaces within the community.

This double perspective is crucial, because the project is closely linked to the current context of urban redevelopment in Sydhavn. The interplay between the design process with the children and the ongoing development in the area reveals how the contextual conditions become an influential part of the co-design process – and vice versa. Hence, the overall process encompasses various forms of strategic manoeuvring within local planning agendas and the interventions feed into discourses and narratives about the future development of public space in the city.

The participatory process consisted of two site interventions (a third pilot project carried out a year earlier is not addressed in this article). In these interventions researcher and designers collaborated with local children to develop and subsequently build the urban installations,

which are semi-temporary (a maximum period of five years was agreed with the municipality). The first stage of the design and construction was executed in spring and summer 2017 and took place in the context of the local public school and an adjacent underused public green area. Two fifth grade classes (aged 11-12) took part in the project in the period from January to June 2017, during which *Move the Neighbourhood* was incorporated into their weekly craft and design classes. The second design process took place at a local after school club in August 2017.

This article focuses on the first initiative, the collaboration with the two classes, in which the project work was closely integrated into the school curriculum and the design and building workshops formed a continuous process over a six-month period. During this period, we conducted 15 three-hour design and building workshops in each of the two classes, transforming ideas into built form.

### Co-design approach and workshop themes

What is significant about this project is first of all the duration of time invested in the process – something made possible by *Move the Neighbourhood*'s status as a funded research project, allowing considerable resources to be invested in the time-consuming preparation and agreements, the series of workshops, and various follow-up investigations. Secondly, few co-design processes involving children have the possibility to go all the way from idea and design development to final construction, beyond a model or prototype.<sup>3</sup> Doing so brings a high degree of momentum to the process. It keeps it real and relevant to the children involved and has a concrete impact on the surrounding community.

The outcome of the co-design process is therefore not only a pool of possible 'good ideas' but a new public space that can be seen, visited, played in and explored, discussed, appreciated and also critiqued, providing feedback about both the process and the product.

The final interventions were implemented at full scale through the collaborative construction of installations by children, designers/researchers, and experienced builders.

The co-design process, defined as a setup bringing together designers and people not originally trained in design,<sup>4</sup> involved a wide range of modes of production, forms of dialogue and group formations. As researchers and architects/designers, we planned and facilitated the process using methods from the fields of architecture, co-design and design anthropology.<sup>5</sup> The design interventions are here seen as a form of explorative inquiry,<sup>6</sup> generating ideas not only for the particular site, but also for design disciplines in general.

The process included a variety of scales and media, such as mapping, collaging, model making, 1:1 prototyping, study trips and reference work. Each session was centred on particular spatial themes and concepts and every activity had a specific design outcome in the form of a drawing, a model or another documented intervention that we could use collaboratively to foster dialogue with the children about what a good place is and how to shape space.

One subtheme within the research project, *Body and Place*, involved a series of workshops that focused on how space is perceived and experienced, especially the site in question: the small green space forming an entrance area to the school complex. For instance, the second workshop was planned as a site exploration in which the children used coloured ribbons and movement performatively to measure, visualise and test the site with their bodies in order to comprehend its shape, scale and character. The children conducted individual explorations but also guided each other around through their newly discovered paths and interstices.



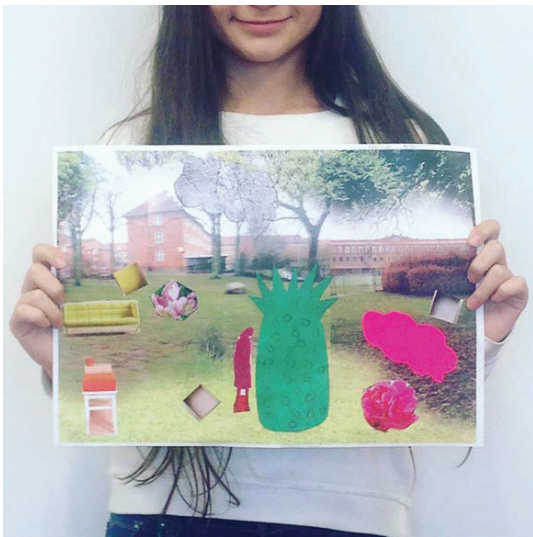
Figure 1: Exploration of the site (Laura Winge).

Movement and bodily experience are important to the project in several ways. The overall research project addresses activity promoting healthy urban spaces.<sup>7</sup> However, we have worked with a broad understanding of activity and health to ensure social inclusion and diversity through a wide spectrum of possible programmes and activities. Another important factor in this regard is the age of the participants, who are children moving into adolescence. As a target group, they retain many of their references to traditional children's play, forms of activity and typologies, but they are also highly aware of their own changing position and social relations in ways that result in them distancing themselves from traditional play and children's facilities. Hence, the project aims to be open to these transformations, needs, and wishes, and to facilitate a design process that does not superimpose traditional sport and playground concepts or gender-stereotyped activities.

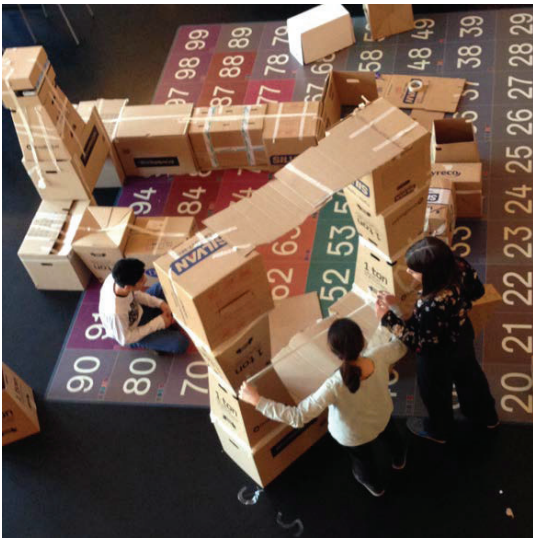
Other conceptual guiding themes were *Materiality and making* and *Design and ideation*. The project aimed to unfold design ideas through a broad spectrum of media and modalities. Various tools, methods and approaches resonate differently depending on the children involved and the exploration of a range of materialities and modes of production made it possible to elicit diverse reactions, interactions and outputs. This was intended to cater for and unfold the creative affordances<sup>8</sup> of materials and spaces and their abilities to foster dialogues and doings. Furthermore, the team set up workshop protocols to ensure that each session would result in physical design outputs – models, drawings, signs, prototypes, and so on – thereby contributing to our empirical material and a collective design conversation.

The concepts of *citizenship* and *ownership* were crucial anchors throughout the workshops. The sessions included activities and discussions that addressed the children's roles as citizens and members of a community, with different ideas, types of knowledge, needs and rights, but also encouraged the children to focus on the public nature of the site and the importance of understanding, respecting and facilitating other users of the space. At the same time, the workshop facilitation addressed how the site intervention could frame a movement 'from I to we'. The 'I', the children's individual experience and personal





*Figures 2-5: The sessions gradually shifted – from mapping, collage making and model building, to obstacle courses in 1:1 (Laura Winge, Anne Margrethe Wagner).*



and embodied understandings of the site in question were important to articulate so that the children developed a relationship to what the majority described as a ‘non-place’ in the initial mapping process. However, it was then also important to move from that personal ownership and individual relationship to a ‘we’ – to a collective attention to the space as part of the community and the city, and as a public space. It proved important to discuss and address these aspects and to approach ownership as both an individual relation to place and a collective awareness and responsibility on a social level.

The participation of the school in question in the UNICEF Rights Respecting School programme, based on the United Nations Convention for the Rights of the Child (UNCRC),<sup>9</sup> supported the focus on children's rights and values relating to democracy and citizenship.

Finally, the concept of *Translation* was an important mutual guiding tool on several levels. In each workshop, links to previous activities were explicitly underlined, highlighting the ongoing creative process of connecting and relating: what did we do last time – and before that? And where are we going now? In addition, in several workshops the children were encouraged to take an idea from one medium into another – going from an abstract model to a detailed drawing or vice versa, and thereby exploring ideas from several perspectives and scales.

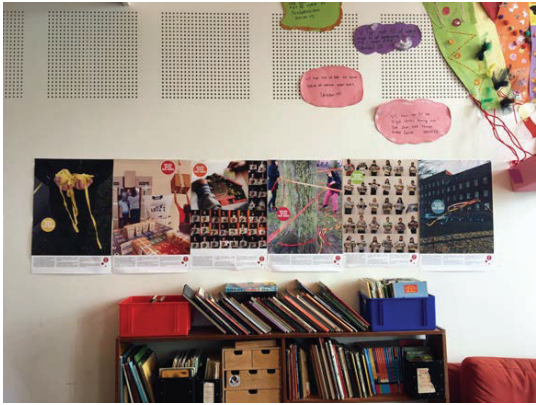


Figure 6: During the design phase, posters illustrating the workshop sessions were placed in the classrooms trace connections (Anne Margrethe Wagner).



Figures 7: During the last design workshops the classes worked with identifying recurring typologies. (Laura Winge).

Equally, in the final synthesis of ideas prior to construction, we as designers and researchers used these ‘families’ of ideas to set priorities for the realisation of a condensed proposal, which was then discussed with the children. Apart from grouping families, more specific cherry-picking was also part of the decision-making process with respect to translation and design. Particular ideas were selected based on, for instance, their poetics, symbolic meaning or aesthetic qualities.



Figure 8: The produced artefacts from the design workshops were collected for an exhibition in the school. The students explained their ideas to researchers, the municipality, teachers and other collaborators (Laura Winge).

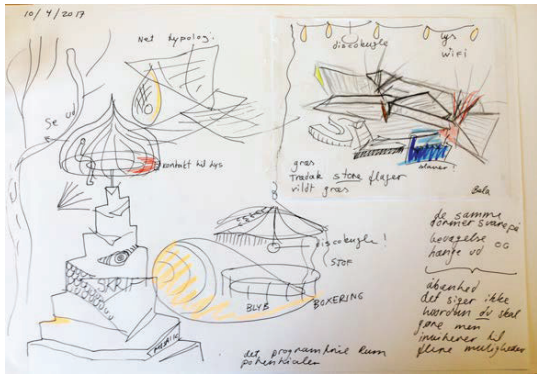


Figure 9: Sketching in the research team to group and combine ideas from workshops (Laura Winge).

The idea development, as well as the subsequent construction process, were documented by the team through field notes, sketches, videos, and photographs. Interviews, emails, and planning documents provided records for further analysis. As mentioned above, the workshops all resulted in physical outcomes: drawings, models, and visual statements. These materials had two ‘lives’ in the project. First, the production processes themselves were part of the investigation of ideas. Second, the products formed an archive of expressions that was further explored during later stages, deliberately separated from the actual situation of production as artistic statements and data, in this way contributing new insights.



## The construction phase

The workshops in January–April 2017 led to the proposal of three main installations: a hybrid kickboxing/dance pavilion; a play tower with a fireman’s pole and an interior hangout space on top; and a series of large white hammocks hanging from decorated wooden poles. Additionally, a piano was placed in a hedged area bordering the site and a small installation of red wooden stepping stones, green grasses and other plants was created next to a large boulder already on the site.

In May 2017, the construction of the installations began on the site, also called ‘Pios Lawn’.<sup>10</sup> During this phase, which lasted until the opening in mid-June, the work was divided between the craft and design lessons of the two classes, though additional work was done by the team as well as by volunteering children, parents and neighbours in the afternoons. And increasingly, these lessons moved from the classroom to the site itself. While the themes guiding the workshop series (described above) were still prevalent in this phase, other modes of working were also introduced, determined by the logics of the construction work and the different tasks that presented themselves along the way. While the design workshops had gradually introduced more 1:1 prototyping to get closer to full-size installations, changing the site became even more hands-on and visible. At first, the children made wooden signs for the site to communicate to the public what was going to happen and to signal that a new outdoor space was about to be built. Then the placement of the installations was discussed and proposals drawn up to allow different setups and locations to be evaluated. Pencils, paper, modelling material, glue, cardboard boxes and ribbons were now replaced by measuring tools, drilling machines, brushes and saws, wood, paint and nails. The tools and materials were introduced to the children on the site by the designers, teachers and professional builders.

These initial acts of ‘occupying’ and activating the territory were important steps that changed the learning environment from a more classroom-based setting to that of a construction site. This also was the stage in the process at which many of the children realised that what we had discussed and developed for months was something that was actually going to be built.



*Figure 10 & 11: The first interventions on site—each class placed signs to communicate the coming action to the neighbourhood and possible positions of the installations were marked and evaluated (Anne Margrethe Wagner).*

The construction phase created a working environment that in some senses was restrictive – specific tasks were related to the completion of the installations, some more popular than others – but in another sense created the opportunity for moments of spontaneity and improvisation.

While many decisions were made prior to construction, some changes and decisions were deliberately made in dialogue on site. Again, the focus on variations in materiality and tools was important – the crafting work and materials resonated with the children in various ways, and showed new sides of them and their creativity when compared with the ‘paper and pencil’ workshops.



*Figure 12: Drawing of the stencil patterns for the hammocks took place on site. (Anne Margrethe Wagner).*



*Figure 13: The recycled flooring for the pavilion being prepared (Anne Margrethe Wagner).*



*Figure 14: Painting the wood for the tower (Anne Margrethe Wagner).*

While some tasks were tedious and repetitive (painting), others were more exciting (screwing the tower together), and the tasks in combination gave the children an understanding of the different modes of work that go into construction and craftsmanship. During the process, the work was organised through the setup of separate working stations that each focused on a specific building task, such as painting wood for the tower or making the pavilion floor. A professional builder, a researcher/designer, and a teacher facilitated each station. Notably, the relationship between the professionals and the children developed rapidly in these smaller groups, where it was easier to be in close dialogue, explain, and discuss the work.

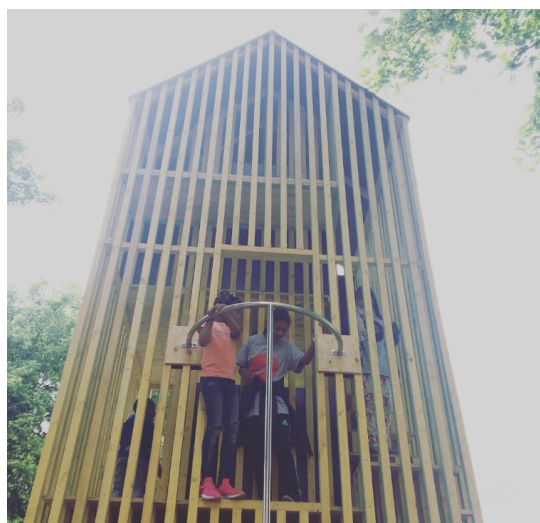
The end of the construction phase was marked by actions that focused on the new role of the space and an outreach to the neighbourhood. The children invited neighbours to the site for the inauguration and planned what should happen at the event.

### Co-design and context-based learning

Learning and education within the field of design and architecture plays a role in the project on several levels and works as an important driver. As a team of researchers with backgrounds in architecture, landscape architecture, and co-design, our project contributes to the field of collaborative design and planning practice. However, the project is also an integrated part of the teaching at the local school, placing the creative development of ideas, dialogue, and negotiations about space on the learning agenda. Throughout the process the children were introduced to methods from design and collaborative practice and thereby gained a deeper understanding of design thinking.

Furthermore, the involvement of skilled craftsmen, trainees, and volunteers further expands the field of learning for the research project as well as for the children, who meet and interact with various stakeholders and professionals during the project.





*Figures 15-17: The three main installations – the pavilion, the tower and the large hammocks(Anne Margrethe Wagner).*

The distinct phases described above highlight different ways in which architectural education and design learning can play out. The idea development workshops introduced the children to design thinking in general and urged them to explore and challenge their ideas both individually and in groups through different media. In addition, this phase introduced a level of collective responsibility and a common level of design evaluation and architectural critique. Most workshop sessions included a final open discussion of the proposals, explicitly focusing on encouraging a ‘professional’ discourse in the two classes. The idea was not to enforce a specific rationale, but to practise constructive and open-minded feedback – what do you like about this idea? How could it be developed? This was consistently encouraged throughout the process. Furthermore, the large variety of media and exercises resonated in different ways with the children. Some loved abstract model building and dived into fantastic worlds of never-before-seen creations, while others preferred to follow the track of making realistic construction drawings that could be discussed with the builders.

The construction phase introduced new context-based learning environments to the project. First, the initial ‘cultivating’ and appropriation of the site evoked a collective sense of seriousness and action. The subsequent construction phase had a different pace from the idea development workshops. While very specific tasks had to be completed to build the installations, this phase also introduced an informal working mode in which, to some extent, tasks had to be undertaken and decisions made along the way. A rather organic working ambience developed, in which the children opted in and out of working stations fluidly and the project manifested itself as a collective activity. As a learning setting, it both engaged the children in professional craftsmanship and prompted them to perceive the space as a site in active transformation.

The move from ideas to physical built space of a rather solid character was both a productive and a challenging aspect of the project. Project setups rarely make it possible for children to be part of the whole process. Often, practicalities such as limits on time and funding restrict from involving children throughout a project and beyond the programmatic input.

However, potential modes of engagement and pedagogical frames can be found throughout project stages.<sup>11</sup> Hence, the pedagogical approach of this initiative is to explore the entire process, from idea to full built scale and its repercussions.

The craft and design classes introduced to the Danish school system in 2016 open up new ways of introducing children to craft, design and innovation. One specific way has been tested in this project by exploring architectural pedagogies and design education in the context of a live project. The competencies promoted in the craft and design curriculum are based on 'practical and sensuous experiences that develop skills to design, produce and evaluate products with aesthetic, functional and communicative value' in a resourceful and sustainable way.<sup>12</sup> These goals fit very well with the focus on combining and exploring modes of production in *Move the Neighbourhood*. Such goals are complemented by an understanding of 'cooperation as a craft',<sup>13</sup> as a skill that needs to be trained and developed, and by a view of craft as a good way to unfold and investigate creative, collaborative working modes. Materials, tools, knowledge, interaction and creativity, the individual and the group interrelate dynamically. Furthermore, the co-design setup contributes valuable insights about the potential of design in society to the basic learning goals of the craft and design classes<sup>5</sup> by introducing considerations of democracy and social inclusion in relation to public space.

We consider the project a dynamic space in which the co-design setup fosters a creative and didactic dialogue, rather than merely a channelling of children's 'voices' into a design brief to be executed without their involvement.<sup>14</sup> This approach is not without its challenges and conflicts. On the contrary, these are considered important learning points and inputs in relation to the dynamics of a design process.

Under the headline of 'resonance pedagogy', sociologist Hartmut Rosa unfolds what he calls 'sparks in the classroom':<sup>15</sup> moments when something transformative happens. A pedagogical turning point comes about when the child/student makes a part of the world his or her own, transforms it and creates a change: a situation that brings what Rosa terms an 'Anverwandlung' – an act of simultaneously

appropriating, making, changing and learning.

These situations can be positive, but also conflictual, and are not necessarily associated with 'good' behaviour. It could be argued that the modes of embodied experience explored in this project created 'sparks' both in and outside the classroom; whether in the wild, unexpected, spontaneous 'hoarding' and very inventive building activity during the obstacle course workshop, in discussions during group design feedback, in the focussed handling of tools or during public space exploration on field trips.

### The 'how' and the 'what'

Research into participatory design provides us with more insights into practice, into the 'how' behind the scenes,<sup>16</sup> but the 'what' – the actual implications for physical output – is also an important aspect to gauge for design research. The process with the children yielded some interesting results in terms of the specific nature of the final designs. The co-design process not only contributed on a programmatic level but also to a very high degree shaped the specific architectural combinations, design details, materiality and whimsical features in the final project. This demonstrates that collaborating with children can in fact bring innovation into the practice of architecture and urban design when the collaboration is well framed in design methodologies and, if possible, explores fields beyond simple idea inputs and Post-it brainstorming. Introducing a wider spectrum of creative modalities into a design and construction process, and focusing on how ideas are negotiated and translated further into concepts and proposals, can provide insights into processes that inform co-design methodology as participatory engagement, but also serve as a potent influence on the architectural quality of the outcome.

### The urban planning context - And now?

As sketched out in the introduction, the design process and the interventions are closely related to on-going planning work in the neighbourhood and the local area renewal initiative. In parallel with the work with the school, a working group has explored possibilities for opening up the school grounds and connecting them better to the area, offering both a new kind of outdoor learning environment for the school and giving the neighbourhood a new park.





*Figure 18-20: A study trip with each class to the urban space ‘Superkilen’ in Copenhagen shifted the setting, bringing the dialogue into another public space which was tested and discussed (Anne Margrethe Wagner).*

The ideas and installations from Move the Neighbourhood are planned to be incorporated into these new visions for the area, and discussions of the site and its learning opportunities have continuously and increasingly been tied together with the development of ideas for the park. Together with several other initiatives on the school grounds, the project figures as one of the ‘experiments’ that are testing new ways of using, connecting with and collaborating in the area.<sup>17</sup>





*Figures 21-23: Details such as the piano and the mirror ball where important collective and symbolic figures throughout the process (Astrid M. B. Rasmussen, Anne Margrethe Wagner).*



*Figure 24: The site on a day in August 2017 (Astrid M. B. Rasmussen).*





*Figure 25: Part of the project team from the local integrated urban renewal office and the head of the school. In spring 2018 the renewal office set up an info box on the site to inform about the future plans of a school park (Anne Margrethe Wagner).*

This context, and the possible future impact of the project, brings huge potential, which it is nevertheless important to gauge critically. The collaboration on the green lawn outside the school premises has created a space that is loved as well as critiqued. But it has also created a narrative of the emergence of a new space in the area. The transition of this space and narrative into another context, that of the vision for a school park, is therefore interesting to follow through a continuous tracing of the translations of the co-design intervention to a new proposal. While temporary prototypes and pilot studies are common procedures as steps towards more permanent changes, these are require further research into planning and design practice and related participatory action. Experimental processes are particularly frequent in integrated urban renewal initiatives in Copenhagen, and ‘co-creation’ and ‘co-design’ have become important keywords in the municipal policies.<sup>18</sup> However, understanding, incorporating and further channeling these processes, their spaces and the learning they facilitate is still a complex field of practice.

So far, our analysis reveals that several stages and events in the co-design and building process have been influential in particular ways – in terms of pedagogy, design and participation as well as in relation to the local context and developments. These will be further mapped and conceptualised in the research and seen in relation to the follow-up observations regarding the use of the space carried out by the research project. The

forthcoming work on *Move the Neighbourhood* will thus examine in more detail the different learning environments within the project, the steps of design translation, and their relation to the current urban planning sketched out here, in order to increase our understanding of the field of co-production, design learning and architectural knowledge embedded in practice.

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